Oliver Stiff

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Education

Meng. Electronic and Information Engineering (Computer Engineering), Imperial College London **2017 - 2021**

- On target for first-class honours – Third-year average: 76.08%
- Relevant modules include: Software Engineering, Object-Oriented Programming (C++), High-Level Programming in F#, Algorithms and data structures, Complexity, Advanced Databases, Machine Learning, Deep Learning, Artificial Intelligence, Language Processors
- Masters Project (due June 2021): *Patient Similarity Retrieval Based on Laboratory Data Cluster Analysis and Visualisation*

French baccalaureate, Lycée Condorcet (Sydney, Australia) **2008 - 2017**

- Scientific stream, 18.57/20 overall, awarded with highest honours
- Relevant subjects: Mathematics 19/20, Physics and Chemistry 18/20

Relevant Experience

Hardware Engineering Intern, Imagination Technologies **July - September 2020**

- Streamlined workflow by creating a script designed to automatically query a database for required drivers and execute a program with suitable inputs (Python)
- Participated in the conversion of VHDL code to Verilog, verified converted code adhered to company guidelines and was formally equivalent to original code, identified and catalogued bugs in the conversion workflow, produced a detailed walkthrough guide targeted at people joining the project (Verilog, VHDL)

Industrial Project, Centre for Bio-Inspired Technology (Imperial College London) **April - June 2020**

- Designed a COVID-19 diagnosis visualisation dashboard (front-end and back-end) aimed at clinicians, displayed spatial and temporal information to identify hotspots (Python, HTML, CSS, JavaScript)
- Analysed diagnosis data and devised a relational database schema
- Developed a RESTful API used to query information and display it on the dashboard

Undergraduate Teaching Assistant, Imperial College London **October 2019 - March 2020**

- Teaching assistant for a procedural and object-oriented programming module (C++)
- Helped students understand key programming concepts and how to use the command line and virtual machines

Projects

Functional programming language **2020**

- Designed and implemented a functional programming language called Blue as part of a team of four (F#), adapted an existing IDE to support our language and implemented syntax highlighting (Electron)
- Created a runtime based on SKI combinator calculus which evaluated the output of the parser
- Developed an extensive test suite, library functions, and a lexer for the Blue language written in Blue

Object finding challenge (Robotics) **2019**

- Placed first in end of term competition. Used sonar to locate objects in a mapped environment, implemented Monte Carlo Localisation to keep track of robot position and return to starting point (Python, Raspberry Pi)

ANSI C to MIPS Assembly compiler, MIPS CPU Simulator **2018 - 2019**

- Implemented a compiler from a subset of C to MIPS assembly and a C to Python translator (Yacc, Lex, C++)
- Created a simulator capable of executing MIPS I binaries with support for over 50 CPU instructions (C++)
- Devised a complete test suite used to demonstrate functionality and identify issues (Bash)

Real-time face detection on an FPGA **2018**

- Designed and implemented a face detection algorithm on an FPGA as part of a team of three, identified and solved issues linked to hardware limitations (Python, HLS)
- Dealt with time constraints, demonstrating good teamwork and organisational skills

Skills and Interests

- **Programming:** C++, Python, F#, SQL, Verilog HDL
- Git, Perforce, Visual Studio, Linux
- Bilingual English & French, Limited working Spanish (*CEFR B1*)
- Hiking, skiing, and travelling